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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,619	12/10/2001	Paul L. Frattini	9842-306-999	4759

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EXAMINER

PALABRICA, RICARDO J

ART UNIT PAPER NUMBER

3641

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/014,619

Applicant(s)

FRATTINI ET AL.

Examiner

Rick Palabrica

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-28 is/are pending in the application.
- 4a) Of the above claim(s) 27 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election with traverse of the apparatus claims 21-28 and species E (corresponding to Figs. 10 –12), in Paper No. 7, is acknowledged. This election is in response to the 8/22/02 Office Action. Based on this election, only claims 21-26 are readable on the elected species. Claims 27 and 28 pertain to a housing geometry that is different from the elected species.

2. Applicant's traverse is on the grounds that: a) the parent application was restricted only between method and apparatus, and no species election was required; and b) no undue burden on the examiner would result from search and examination of species A-E.

The examiner disagrees. First, the current examiner did not examine the parent application and a different examiner has acted on said application. In any case, each patent application (and its accompanying claims) is treated on their own merits. See particularly MPEP 811.04, which states: "Even though inventions are grouped together in a requirement in a parent application, restriction or election among the inventions may be required in the divisional applications, if proper."

Second, contrary to the requirement in said Office Action, applicant did not submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on record that this is the case. Also, contrary to applicant's allegation, each of the identified species would require a separate search in

view of their mutually exclusive characteristics, and these individual searches would not be co-extensive.

Accordingly, the restriction requirement is still deemed proper and is therefore made **FINAL**.

Oath/Declaration

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because: it refers to a different application, i.e., 09/545,354 and not to the current application, i.e., 10/014,619.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim Rejections - 35 USC § 112

4. Claims 21-26 are rejected under 35 U.S.C. 112, first paragraph, because there is no adequate or enabling disclosure of how such could be accomplished using the applicant's invention.

Claim 21, lines 5-6, the limitation "a plurality of ultrasonic transducers that **each** produce omni directional ultrasonic waves and positioned on said outside surface of

said housing.” There is neither an adequate description nor enabling disclosure as to how and in what manner **each** transducer, by itself, can produce said omni directional energy waves. Note from the Summary of the Invention that the applicant states, “a **set** of ultrasonic transducers is positioned on the housing to supply radially emanating omni directional ultrasonic energy to remove deposits from the nuclear fuel assembly” (see, for example, page 3, lines 13+ and page 5, lines 20+ of the Specification). Clearly, a “set of transducers” is totally different from “each transducer.”

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over anyone of Kato et al. (U.S. 5,467,791), or Musiol et al. (U.S. 4,847,042), or Yokokawa et al. (JP5-142385-A), in view of the combination of Scharton et al. (U.S. 4,320,528) and Walter et al. (U.S. 5,200,666). Anyone of Kato et al., or Musiol et al., or Yokokawa et al. disclose the applicant's claims except for the elongated transducer bars, their placement outside the housing and their production of omni directional ultrasonic energy waves.

The claims are replete with statements that are either essentially method limitations or statements of intended or desired use. Examples include, “for cleaning an irradiated nuclear fuel assembly”, “to receive an irradiated nuclear fuel assembly”, “to secure said housing to a floor of a fuel pool”, etc. These clauses, as well as other statements of intended use do not serve to patentably distinguish the claimed structure over that of the reference, as long as the structure of the cited references is capable of performing the intended use. See MPEP 2111-2115.

See also MPEP 2114 that states:

A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647.

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531.

[A]pparatus claims cover what a device is, not what a device does.”
Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528.

As set forth in MPEP 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

Any one of the apparatus cited below is capable of being used in the same manner and for the intended or desired use as the claimed invention.

Kato et al. disclose an ultrasonic cleaning device for a fuel assembly comprising a housing 127 with an outside surface, and a plurality of ultrasonic transducers 111

positioned inside said housing (e.g., see Fig. 6). A support stand 109 and base 109a secure the housing to the fuel pool floor.

Musiol et al. disclose an apparatus for removing deposits on the outer surface of the fuel rods of a nuclear fuel assembly, comprising a housing 4, ultrasonic oscillator 9 and a housing base 6 (see Fig. 1 and column 3, lines 15+).

Yokokawa et al. disclose an ultrasonic apparatus for cleaning a spent nuclear fuel assembly comprising a housing 8 and 20, an ultrasonic transducer 4, and a housing base.

Scharton et al. disclose an ultrasonic cleaner apparatus for a nuclear component and teach that the ultrasonic transducer can be placed either inside the housing (see Fig. 4) or outside the housing (see Fig. 6).

Applicant discloses the use of push-pull transducers described by Walter et al. (U.S. Patent No. 5,200,666) to produce the omni directional pressure waves. In fact, applicant's Fig.2 and Walter et al.'s Fig. 1 are almost identical. Walter et al. further teach that their invention can emit twice the amount of ultrasonic energy compared to other transducers with the same geometric dimensions (see column 2, lines 1+).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus, as disclosed by any one of Kato et al., or Musiol et al., or Yokokawa et al., by the teaching of the combination of Scharton et al. and Walter et al. to have a plurality of omni directional ultrasonic transducers each comprising an elongated rod with a transducer at a first end and another transducer at the second end, said transducers positioned substantially parallel

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to the housing direction and on the outside surface of said housing, to gain the advantages thereof (i.e., more effective ultrasonic energy generation)), because such modification is no more than the use of well-known type and method of placement of ultrasonic transducers for cleaning nuclear components, including spent fuel assemblies.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. IDS References AF and AI further illustrate prior art.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick Palabrica whose telephone number is 703-306-5756. The examiner can normally be reached on 7:00-4:30, Mon-Fri; 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 703-306-4198. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

RJP
April 2, 2003

RECEIVED
SUPERVISOR
FIRST EXAMINER